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# Computer Simulation In Logistics With Visual Basic Application

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Annual Department of Defense Bibliography of Logistics Studies and Related Documents

A Normative Model for Total Asset Visibility in the Air Force Logistics System

Assessing the Impacts of Lean Logistics Infrastructures on Strategic Airlift Capability

Advanced Systems Modeling and Simulation

Computer Simulation Model for Traffic Flow Analysis

International Arrivals Building, Honolulu International Airport

Education and Applied Research

PLANET ; Planned Logistics Analysis and Evaluation Technique

SPIoT-2020, Volume 2

Depot Simulation

Multi-attribute Taxi Logistics Optimization

Modeling and Simulation of Logistics Flows 3

Discrete and Continuous Flows in 2D/3D

With Visual Basic Application

Project TRANSIM

Simulation-Based Case Studies in Logistics

A New Approach to Computer Modeling and Simulation for Logistics Systems Analysis

Simulation of Reverse Logistics Network Designs for Computer Recovery

Stochastic Computer Simulation of Forest Biomass Logistics in Greece

A Computer Simulation of Logistics Networks for Wargame Umpires

Computer Simulation and Gaming in Logistics Research

Modeling and Simulation of Logistics Flows 1

Frontier Computing

Simulation of a Multi-echelon Logistics Support System

Simulation Modeling and Arena

Managing Reverse Logistics Using System Dynamics: A Generic End-to-end Approach

Amphibious Logistics Support Ashore (ALSA) (A Computer Simulation).

New Research Trends in Transport Sustainability and Innovation

An Analysis of the Effects of Lean Logistics on the Current Air Force Repairable

Pipeline: A Simulation Study

Logistics Control Facility

Computer Simulation in Logistics

Computer-based Modelling and Optimization in Transportation

Assessing and Optimizing the Reverse Logistic Process Using Computer Aided

Modelling Techniques

A Ten-year Progress Report

A Computer Simulation Study of Material Requirements Planning Systems

Design and Simulation of RFID-Enabled Aircraft Reverse Logistics Network Via Agent-Based Modeling

Theory, Technologies and Applications (FC 2019)

Discrete and continuous flows in 2D/3D. 3

Computer Simulation and Logistics Management

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Elsevier

Integrates the concepts of logistics management and simulation to help executives and managers improve their logistics decisions.

*A Normative Model for  
Total Asset Visibility in the  
Air Force Logistics System*  
Springer Nature

Traditionally, there have been two primary types of simulation textbooks: those that emphasize the theoretical (and mostly statistical) aspects of simulation, and those that emphasize the simulation language or package. Simulation Modeling and Arena,

Second Edition blends these two aspects of simulation textbooks together while adding and emphasizing the art of model building. This book features coverage of statistical analysis, which is integrated with the modeling to emphasize the importance of both topics. The Second Edition features new topical coverage, including static simulation and spreadsheet simulation; how simulation works and why it matters; and expanded use of Arena, specifically the use of

strings in models, the Attribute module, the OnChange block, visual dashboards, and an introduction to 3-D animation concepts. In addition, a running example is presented throughout each chapter to prepare readers to perform a realistic case study based on the IIE/RA contest problem. The new edition also contains expanded topical coverage on: simulation clock within discrete event modeling simulation; statistical modeling concepts with

the theoretical basis and equations needed to perform the analysis by hand; increased use of Arena Run Controller, modeling non-stationary arrival processes; and the Wait-Signal constructs. [Assessing the Impacts of Lean Logistics Infrastructures on Strategic Airlift Capability](#) Diplomarbeiten Agentur This book gathers the proceedings of the 9th International Conference on Frontier Computing, held in Kyushu, Japan on July 9-12, 2019, and provides comprehensive

coverage of the latest advances and trends in information technology, science and engineering. It addresses a number of broad themes, including communication networks, business intelligence and knowledge management, web intelligence, and related fields that inspire the development of information technology. The respective contributions cover a wide range of topics: database and data mining, networking and communications, web and internet of things,

embedded systems, soft computing, social network analysis, security and privacy, optical communication, and ubiquitous/pervasive computing. Many of the papers outline promising future research directions, and the book will benefit students, researchers and professionals alike. Further, it offers a useful reference guide for newcomers to the field. Advanced Systems Modeling and Simulation John Wiley & Sons This book presents the proceedings of The 2020

International Conference on Machine Learning and Big Data Analytics for IoT Security and Privacy (SPIoT-2020), held in Shanghai, China, on November 6, 2020. Due to the COVID-19 outbreak problem, SPIoT-2020 conference was held online by Tencent Meeting. It provides comprehensive coverage of the latest advances and trends in information technology, science and engineering, addressing a number of broad themes, including novel machine learning and big data

analytics methods for IoT security, data mining and statistical modelling for the secure IoT and machine learning-based security detecting protocols, which inspire the development of IoT security and privacy technologies. The contributions cover a wide range of topics: analytics and machine learning applications to IoT security; data-based metrics and risk assessment approaches for IoT; data confidentiality and privacy in IoT; and authentication

and access control for data usage in IoT. Outlining promising future research directions, the book is a valuable resource for students, researchers and professionals and provides a useful reference guide for newcomers to the IoT security and privacy field. Computer Simulation Model for Traffic Flow Analysis John Wiley & Sons  
This research investigates the effect of Lean Logistics proposals on the current Air Force

reparables pipeline. Lean Logistics proposes reducing repairable asset levels at operating bases, reducing transportation time between bases and depots, and reducing depot repair times. Computer simulation is used as a tool to perform a 3X3X3 full factorial experiment to determine the effects of the Lean Logistics proposals on fully mission capable aircraft and transportation cost. Results indicate that lean Logistics outperforms the current reparables pipeline in term of fully

mission capable aircraft. A cost benefit analysis is performed to determine the trade offs between transportation costs and asset outlays. Logistics management, Pipeline, Inventory, Transportation, Repair.

International Arrivals

Building, Honolulu

International Airport

Springer Science &

Business Media

Computer Simulation in

LogisticsWith Visual Basic

ApplicationPraeger Pub

Text

Education and Applied

Research Diplomica

Verlag

In Chapter I, background about the original problem is presented and an explanation is given for the necessity of delimiting the problem. An explanation of the subject matter to be studied is included and the hypotheses advanced are stated. Research methodology and objectives are outlined. In Chapter II an effort is made to determine the similarities and contrasts of the military logistics process and the commercial marketing

process. In Chapter III principal emphasis is focused on the decision-making process encountered by military and industrial managers with examples of where simulation has been used in this process by military and civilian managers. Chapter IV is a comparison of computer simulation applied to a job shop process in a military repair activity and a commercial firm. Chapter V is a comparison of computer simulation applied to an inventory control process by a

military inventory manager and a commercial firm. Chapter VI describes the application of computer simulation to a specifically defined inventory control problem in analyzing alternative courses of action under divergent inventory policies. (Author).

*PLANET ; Planned Logistics Analysis and Evaluation Technique*  
Computer Simulation in Logistics With Visual Basic Application  
Volume 3 begins with an introduction to which are

added four chapters focused on modeling and flow simulation in an environment in 2 or 3 dimensions (2D or 3D). They deal with different cases taken from situations found in the field. A conclusion comes close this third book: The different software used in this third volume  
Computer simulation of discrete flows  
Mixed flow simulation  
Flows in 3D and the evacuation simulation  
Flows in 3D for conveying and storage  
The conclusion discusses the future developments

of the software and their integration into society. At the end of each volume is a bibliography and a list of web links. There is also a glossary explaining some abbreviations, acronyms and some very specific terminology of logistics and operations research.  
SPIoT-2020, Volume 2  
Springer Nature  
This dissertation, "A Hybrid Evolutionary Algorithm for Optimization of Maritime Logistics Operations" by Yin-cheung, Eugene, Wong, □□□, was obtained from The University of Hong Kong



(Pokfulam, Hong Kong) and is being sold pursuant to Creative Commons: Attribution 3.0 Hong Kong License. The content of this dissertation has not been altered in any way. We have altered the formatting in order to facilitate the ease of printing and reading of the dissertation. All rights not granted by the above license are retained by the author. DOI: 10.5353/th\_b4452676 Subjects: Evolutionary programming (Computer science) Evolutionary computation Artificial

intelligence  
Immunocomputers  
Immune system -  
Computer simulation  
Shipping Logistics  
Depot Simulation Praeger  
Pub Text  
In support of a request from the Air Force Logistics Command, a model of the Advanced Logistics System (ALS) CYBER 73 Batch processing system was developed. The initial specification required that this model allow changes to the magnetic tape unit configuration and to all essential installation

parameters. In order to determine the best approach, the various computer system modeling techniques are first surveyed. Then, based on the modeling goals and requirements, a queue level simulation model is selected as the best approach. The basic features of the CYBER 73 computer system are discussed and a description of job movement through the system is given. This discussion is used to describe the various system queues and the

SCOPE integrated scheduler. The algorithms used in the model are then developed and the accuracy of the model verified by comparison against data obtained from the ALS CYBER 73 batch system during test runs of a typical jobmix. The verification process showed that all of the original design objectives were met, although several areas of possible improvement to the model are indicated and discussed.

*Multi-attribute Taxi Logistics Optimization*

John Wiley & Sons  
The purpose of this research was to compare two lean logistics infrastructures to See which one would provide better support for the C-5 aircraft. The level of support was defined as the average number of mission capable parts (MICAPs) created by system operation. One infrastructure had the central storage facility (CSF) located at the depot and the other had a geographically separate CSF. A computer simulation model

developed by the Air Force Logistics Management Agency was run for a period of twelve years and the average number of MICAPs for each system was collected. The data was then analyzed using a paired T-test. The results showed that the infrastructure with the CSF located at the depot resulted in significantly fewer average MICAPs over a twelve year simulation period. The conclusion is that with regards to the average number of MICAPs

produced by system operation, an infrastructure with the CSF located at the depot is desired.

### **Modeling and Simulation of Logistics Flows**

Springer Reverse Logistics (RL) has become increasingly popular in different industries especially aerospace industry over the past decade due to the fact that RL can be a profitable and sustainable business strategy for many organizations. However, executing and fulfilling an efficient

recovery network needs constructing appropriate logistics system for flows of new, used, and recovered products. On the other hand, successful RL network requires a reliable monitoring and control system. A key factor for the success and effectiveness of RL system is to conduct real-time monitoring system such as radio frequency identification (RFID) technology. The RFID system can evaluate and analyze RL performance timely so that in the case of deviation in any areas

of RL, the appropriate corrective actions can be taken in a quick manner. An automated data capturing system like RFID and computer simulation techniques such as agent-based (AB), system dynamic (SD) and discrete event (DE) provide a reliable platform for effective RL tracking and control, as they can respectively decrease the time needed to obtain data and simulate various scenarios for suitable best corrective actions. The functionality of the RL system can be noticeably

elevated by integrating these two systems and techniques. Besides, each computer simulation approach has its own benefits for understanding the RL network from different aspects. Therefore, in this study, after designing and constructing the RL system through the real case study from Bell Helicopter Company with the aid of unified modeling language (UML), three simulation techniques were proposed for the model. Afterwards the results of all three

simulation approaches (AB, SD and DE) were compared with considering two scenarios of RL RFID-enabled and RL without RFID. The computer simulation models were developed using AnyLogic 7.1? software. The results of the research present that with exploiting RFID technology, the total disassembly time of a single helicopter was decreased. The comparison of all three simulation methods was performed as well.  
Keywords: Reverse

logistics (RL), RFID, aerospace industry, agent-based simulation, system dynamic simulation, discrete event simulation, AnyLogic.

### **Discrete and Continuous Flows in 2D/3D** Helsingin Yliopisto

As legislations have become stricter and the competition on markets is getting stronger, companies facing return flows strive for the implementation of efficient and cost-effective reverse logistic procedures. At the same time, when managing

reverse logistics, they are not only confronted with a high degree of uncertainties concerning the quality, quantity and timing or the product returns, but also with a dynamically changing environment. Various aspects, such the increasing amount of return flows, shorter repair and lead times as well as increasing disposal costs, affect the reverse logistic system and need to be managed proficiently. Additionally, handling product returns requires supportive

computer aided modelling tools that are capable of handling the dynamic and complex characteristics of the reverse logistic system and allow an improved estimation of the impact of a changing environment and management decisions. For the purpose of this study, the system dynamics modelling approach has been identified as particularly suitable for illustrating the system in question with a special focus on understanding the dynamic behaviour over

time. A generic system dynamics model has been exemplarily created and simulated using the program iThink. The model comprises end-to-end processes of the main reverse logistic activities related to customer returns and has been used for studying the strategic design and optimization of the reverse logistic system. In order to consider relevant uncertainties as well as environmental concerns and economic efficiency, representative policies have been applied where,

inter alia, with the help of the graphical illustration of the processes, effective strategies could be implemented. A general evaluation of the system dynamics methodology has revealed the significant advantages of using supportive modelling techniques for strategic decision making. Particularly for complex systems that change over time, such as reverse logistics, applying appropriate computer aided modelling tools in order to anticipate the overall effect on

processes caused by varying surroundings has proven essential. An effective utilization of system dynamics may significantly reduce the forecasting and planning risks within individual frameworks, such as capacity planning. Moreover, the generic approach allows the application of the model to any other industry that is characterized by uncertain capacity utilization and varying technical, economical and legal conditions.  
*With Visual Basic*

*Application* Springer Science & Business Media  
The document covers a technique which was developed to satisfy the need for a model of 'weapon system logistics.' It is a series of four computer simulation models designed to examine the hardware-configuration/operations/ logistics-support interactions of a variety of weapon systems in a single-base or multibase environment. (Author).  
Project TRANSIM  
Volume 1 presents successively an

introduction followed by 10 chapters and a conclusion: A logistic approach an overview of operations research The basics of graph theory calculating optimal routes Dynamic programming planning and scheduling with PERT and MPM the waves of calculations in a network spanning trees and touring linear programming modeling of road traffic

#### Simulation-Based Case Studies in Logistics

Volume 3 begins with an introduction to which are added four chapters

focused on modeling and flow simulation in an environment in 2 or 3 dimensions (2D or 3D). They deal with different cases taken from situations found in the field. A conclusion comes close this third book: - The different software used in this third volume; - Computer simulation of discrete flows; - Mixed flow simulation; - Flows in 3D and the evacuation simulation; - Flows in 3D for conveying and storage The conclusion discusses the future developments of the software and their

integration into society. At the end of each volume is a bibliography and a list of web links. There is also a glossary explaining some abbreviations, acronyms and some very specific terminology of logistics and operations research.

#### **A New Approach to Computer Modeling and Simulation for Logistics Systems Analysis**

Advanced Systems Modeling and Simulation explains a wide range of concepts, tools, and techniques for advanced systems modeling and

simulation. A simulation is a computer model of a system and almost any phenomenon can be analyzed and described as such in order to gain practical insights into how it works. Increases in computing power as well as ongoing developments in the creation and storage of data have brought simulations into a wider range of application areas, adding significant value and also creating a need for information and advice on how to use these tools in new contexts. Starting with

fundamental information on modeling and simulation, this book goes on to provide detailed and practical advice on the most relevant modeling and simulation methods, before exploring case studies from applications in other areas, including transportation, supply chain, manufacturing, and healthcare. Explains the fundamentals of systems modeling, helping a wide range of readers engage with these methods. Provides practical advice on decision-making under uncertainty. Features

applications and case studies from a range of industries, including manufacturing, supply chain, transport, and healthcare.

[Simulation of Reverse Logistics Network Designs for Computer Recovery](#)  
(Cont.) This thesis investigates the factors of inefficiency in the current taxi system, reviews previous taxi efficiency studies, and suggests possible solutions. After extensive literature reviews and field research, a computer simulation model has



been built in the MATLAB environment. This computer model tests various attributes that affect logistic optimizations for taxi services. In particular, the effect of taxi fleet size, the quantity of hotspots, and the concentrations of customers at hotspots are analyzed in detail using the model. The metric of interest includes the customers' wait time, taxi revenue, and costs of operations. Results from the computer simulation experiments, field research, and literature

review are analyzed and synthesized. Possible solutions are proposed as part of this thesis.

*Stochastic Computer Simulation of Forest Biomass Logistics in Greece*

Inhaltsangabe:Introduction: As the world population is growing continuously and emerging markets are expanding, natural resources are being used even more intensively. Because of the scarcity of natural resources, industry faces a changing business environment. Due to government

regulations, companies nowadays must handle not only in terms of efficiency, but also of sustainable development and new market opportunities. Thus, with the progression of the logistics sector in recent years, supply chain management and especially the concept of reverse logistics have become more important for both, industry and science. By utilizing reverse logistics, companies aim at maximizing their product revenue while reducing

the costs of product returns. Accordingly, implementing an effective concept of reverse logistics, while manufacturing environmentally friendly products, has become a strategic issue. In order to meet the requirements, companies are confronted with the problem of reducing the uncertainties regarding the quality, quantity and timing of the product returns. In this context, a high level of uncertainty leads to a strong increase in complexity compared to

the traditional forward supply chains. Using modern computer aided modelling techniques such as system dynamics, helps to counteract this complexity since they not only enable a better understanding of the dynamic behaviour of such complex systems but also allow an improved estimation of the impact of a changing environment and management decisions. This thesis contributes towards an improvement of the strategic decision making process in the

field of reverse logistics by providing a generic simulation model which can be used to analyse the influence of different environmental and economical policies with respect to prevailing market conditions. To achieve this objective, the following approach is proposed: In Chapter 2, the theoretical foundation of reverse logistics is characterized forming the framework for the subsequent analytical approach concerning the appropriate model development. For this

purpose, first, an overview of the state of the art concerning the processes and influencing factors within the field of reverse logistics is provided. This is achieved by describing the theoretical background of the topic, including a characterization of the impact of individual reverse logistic activities on each other and on their environment. Afterwards, current

challenges and trends when [...]

### **A Computer Simulation of Logistics Networks for Wargame Umpires**

A computer program for simulating alternative inventory policies for a multi-echelon logistics support system is described. In its present form, the computer program simulates a force composed of nine Polaris submarines, one tender and one depot. Attention

is given in the paper to the representation of the physical system, divergencies from the actual environment, decision rules internal to the computer program and computer inputs and outputs. An actual simulation experiment is described and evaluated in terms of the cost and effectiveness measurements permitted via utilization of the simulator. (Author).